



Associate of Science with Emphasis Degree

Area of Emphasis: Pre-Engineering for Civil Eng. and Industrial Eng.

Suggested Degree Pathway at Tri-C

[Rev. August 18, 2016]

The adjacent courses are suggested for students interested in transferring to a four-year university, after earning their Associate of Science degree, to pursue a Bachelor of Science in **Civil Engineering** or **Industrial Engineering**. Students following this degree pathway will earn an **Associate of Science** degree from Cuyahoga Community College.

Completion of this degree pathway does not guarantee admission to the four-year program of your choice, nor admission at the junior level. Be sure to consult with a representative at your university of choice regarding admission requirements and transferability of specific courses. This guide is provided solely for convenience and completion of the Associate of Science degree; **be sure to work closely with your Tri-C counselor and representatives at your intended transfer school.**

* Indicates TAG (Transfer Assurance Guide) approved classes. TAGs are officially transferable to Ohio four-year public universities.

** See a counselor for assistance selecting a transferable math course.

*** See a counselor for assistance selecting a transferable course that also fulfills the Associate of Science degree requirement.

**** See a counselor for assistance selecting a transferable course.

- Additional courses beyond the scope of this Associate of Science degree pathway that may be applicable to a transfer sequence include CHEM 1310/131L, MET 2041, MET 2601, and IT 2670.
- Consider taking Calculus-based Strength of Materials and/or Calculus-based Fluid Mechanics at your transfer institution during the Summer term after Semester 4.

SEE IMPORTANT NOTES ON 2ND PAGE OF THIS GUIDE.

Your English and Math placement scores will determine if you must complete prerequisite coursework before starting this pathway. Meet with a Tri-C counselor to discuss options.

Prerequisite ENG and MATH – see counselor		
Semester One		Credits
ENG 1010 OR	College Composition I*	3
ENG 101H	Honors College Composition I*	
CHEM 1300/130L OR	General Chemistry I /Chemistry Lab*	5
CHEM 130H/130L	Honors General Chemistry I /Chemistry Lab*	
MATH 1610** OR	Calculus I*	5
MATH 161H**	Honors Calculus I*	
MET 1100	Technology Orientation	2
TOTAL		15

Semester Two		Credits
ENG 1020	College Composition II*	3
ENG 102H	Honors College Composition II*	
PHYS 2310	General Physics I*	5
MET 2610	Engineering Statics	3
MATH 1620** OR	Calculus II*	5
MATH 162H**	Honors Calculus II*	
TOTAL		16

Semester Three		Credits
MATH 2520	Differential Equations	3
CNST 2110**** OR	Basic Survey Practices*	3
MET 2422****	Fundamentals of Engineering Economics	
MET 2430	Engineering Probability and Statistics	3
MET 2620	Engineering Dynamics	3
PHYS 2320	General Physics II*	5
TOTAL		17

Semester Four		Credits
MATH 2310** OR	Calculus III*	4
MATH 231H** OR	Honors Calculus III*	
ESCI 1410/141L OR	Physical Geology /Geology Lab	3
ESCI 141H/141L	Honors Physical Geology /Geology Lab	
DEGR-xxxx***	Social & Behavioral Sciences Elective	3
DEGR-xxxx***	Social & Behavioral Sciences Elective	3
DEGR-xxxx***	Arts & Humanities Elective	3
DEGR-xxxx***	Arts & Humanities Elective	3
TOTAL		16

- Associate of Science Degree Awarded - Total Hours: 64



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IMPORTANT NOTES:

- The degree earned by using this guide will be labelled ***Associate of Science***. The specific area of emphasis (Pre-Engineering for Civil Eng. and Industrial Eng.) is not included on the Associate of Science degree/diploma nor on student transcripts.
- Your English and Math placement scores will determine the classes you must take in those course sequences. **Placement at a level lower than the initial English and Math courses listed in this guide will likely delay your completion of this degree pathway. Meet with a counselor at your campus to discuss options.**
- Students should take courses in the Ohio Transfer Module (OTM) for all associate degree required areas, and approved Transfer Assurance Guide (TAG) courses when possible.
- Students who complete the entire Ohio Transfer Module and graduate will complete the general education requirements at many Ohio public and private institutions.
- **This suggested degree pathway is intended as a guide only.** Each student's path is unique, and no single course sequence will serve all purposes. To ensure that your course selections will meet your transfer needs, be sure to:
 - **Meet with a Tri-C counselor to choose appropriate courses to achieve your transfer goals.**
 - Speak with an admissions representative at your intended transfer school.
 - Contact the department of your intended major at your intended transfer school to discuss that program's specific requirements.
 - **Check the Tri-C Transfer Center webpage** where you will find Articulation Agreements with a number of four-year institutions. The Agreements show requirements and seamless Transfer Pathways specific to various programs at those institutions.
 - **If an Articulation Agreement exists for your intended transfer school and program, use it instead of this Area of Emphasis guide.**
 - If an Articulation Agreement does not exist, use this Area of Emphasis guide but keep in mind that electives are typically best decided by the transfer school to meet their institutional requirements.